

ITILE: TRANSFERABLE PLASMID MEDIATED ANTIBIOTIC RESISTANCE IN  
BACTEROIDES.  
AUTHOR(S): ROTIMI V O [Reprint author]; DUERDEN B I; HAFIZ S  
CORPORATE SOURCE: DEP MED MICROBIOL, UNIV SHEFFIELD MED SCH, BEECH HILL ROAD,  
SHEFFIELD S10 2RX, UK  
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AB Plasmid-mediated resistance to **chloramphenicol** (Chlr), erythromycin (Eryr), tetracycline (Tetr) and clindamycin (Clindr) was transferred from 3 clinical isolates of *B. fragilis* and 1 fecal isolate of *B. thetaiotaomicron* to strains of *B. fragilis*, *B. distasonis* and *Escherichia coli*, and subsequently to *B. fragilis* and *E. coli* 2nd- and 3rd-stage recipients in series. Successful transfer was achieved by membrane-filter and centrifugation techniques that provide stable cell-to-cell contact but not by simple mixed broth culture. Chlr, Eryr, Tetr, Clindr and Eryr were transferred at high frequency ( $1.9 \times 10^{-3}$ - $1.8 \times 10^{-4}$ ) but Tetr was transferred at low frequencies ( $1-1.6 \times 10^{-6}$ ). Segregation of resistance markers was observed with **selection** or Tetr when donors were Chlr, Eryr, Tetr, Chlr and Tetr. All transipients were identical with the parent recipient strains but had the resistance markers of the donor strains. Resistance to antibiotics other than tetracycline was cured by growth with subinhibitory concentrations of aminoacridines and ethidium bromide for 24 h; cure of solitary Tetr required longer incubation (21 days). Identical plasmid DNA bands were demonstrated by agarose-gel electrophoresis in all the donor and corresponding transipient strains but plasmids were not found in the recipient strains or in strains cured of resistance. Plasmid-mediated transferable antibiotic resistance in *Bacteroides* spp. may compromise the treatment of infections and may provide a reservoir of **antibiotic resistance** in the intestinal flora.